



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

SW

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------|-------------|----------------------|---------------------|------------------|
| 10/631,117 | 07/31/2003 | Goichi Katayama | FS.20113US0A | 7749 |
| 20995 | 7590 | 12/17/2004 | EXAMINER | |
| KNOBBE MARTENS OLSON & BEAR LLP | | | CHANG, CHING | |
| 2040 MAIN STREET | | | ART UNIT | |
| FOURTEENTH FLOOR | | | PAPER NUMBER | |
| IRVINE, CA 92614 | | | 3748 | |

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 10/631,117 | Applicant(s) KATAYAMA, GOICHI | |
| | Examiner Ching Chang | Art Unit 3748 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on October 18, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-7, 12 and 15-18 is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-11, 13-14, 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office is in response to the amendment filed on August 18, 2004. Claim 16 is cancelled, and new claim 19 is added as requested.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. ***Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.***

More specifically, " the outer area " in claim 19 lacks an antecedent basis, therefore it renders the claim indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

Art Unit: 3748

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. ***Claims 1-4, 8-11, and 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukuda et al. (US Patent No. 6,582,262).***

Fukuda discloses an internal combustion engine (2) comprising an engine body (21, 22, 23, 24) having at least an outer surface that defines an outer area next to thereto, an output shaft (3) extending through the engine body, an air intake system (See Col. 5, line 64 through Col. 6, line 54) arranged to deliver air to a combustion chamber (27) of the engine, the air intake system having an intake valve (31a, 31b) movable between a closed position at which the air is not allowed to move to the combustion chamber and an open position at which the air is allowed to move to the combustion chamber, an exhaust system arranged to route exhaust gases in the combustion chamber to an external location of the engine, the exhaust system having an exhaust valve (33a, 33b) movable between a closed position at which the exhaust gases are not allowed to move to the external location and an open position at which the exhaust gases are allowed to move to the external location (See Col. 5, line 50 through line 63), at least one camshaft (32a, 32b, 34a, 34b) actuating the intake valve or the exhaust valve, the camshaft extending through the engine body and toward the outer area beyond the outer surface, a drive mechanism (51) arranged to drive the camshaft, at least a portion of the drive mechanism being disposed in the outer area, a hydraulically operated change mechanism (85a, 85b) arranged to change an angular position of the camshaft relative to the output shaft, and a control valve unit (84) configured to control the change mechanism (See Col. 9, line 37 through Col. 11, line

Art Unit: 3748

44), the control valve unit comprising an actuator (115) and a valve member, the valve member at least in part being disposed within the outer area (See Figs. 1-2, 4-5); wherein the control valve unit is positioned generally at the same level as the drive mechanism from the outer surface; wherein the drive mechanism comprises a flexible transmitter (56) extends around the output shaft and the camshaft such that the output shaft drives the camshaft through the transmitter, the control unit is disposed next to the transmitter, the control valve unit is positioned generally at the same level as the transmitter; wherein the transmitter forms a loop, the control valve unit is disposed out of the loop (See Fig 4); the said engine additionally comprising a fluid passage through which a hydraulic working fluid moves between the control valve unit and the change mechanism, the engine body having a member (23) defining the outer surface, the member internally forms at least a portion of the fluid passage (See Figs. 5-7); wherein the camshaft actuates the intake valve; wherein the engine powers a marine propulsion device (13, 14, 15, 16).

5. ***Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Fukuda et al. (US Patent 6,582,262).***

Fukuda discloses an internal combustion engine (2) comprising an engine body (21, 22, 23, 24) having an outer surface, an output shaft (3) extending through the engine body, an air intake system (See Col. 5, line 64 through Col. 6, line 54) arranged to deliver air to a combustion chamber (27) of the engine, the air intake system having an intake valve (31a, 31b) movable between a closed position and an open position, an

Art Unit: 3748

exhaust system arranged to route exhaust gases in the combustion chamber to an external location of the engine, the exhaust system having an exhaust valve (33a, 33b) movable between a closed position and an open position (See Col. 5, line 50 through line 63), at least one camshaft (32a, 32b, 34a, 34b) actuating the intake valve or the exhaust valve, the camshaft extending generally through the engine body and toward an outer area (next thereto the outer surface) beyond the outer surface, a drive mechanism (51) arranged to drive the camshaft, at least a portion of the drive mechanism being disposed in the outer area, a hydraulically operated change mechanism (85a, 85b) arranged to change an angular position of the camshaft relative to the output shaft, and a control valve unit (84) configured to control the change mechanism (See Col. 9, line 37 through Col. 11, line 44), the control valve unit comprising an actuator (115) and a valve member, the valve member being disposed along the outer surface (See Figs. 1-2, 5).

Allowable Subject Matter

6. Claims 5-7, 12, and 15-18 are allowed.

Response to Arguments

7. Applicant's arguments filed on August 18, 2004 have been fully considered but they are not persuasive.

More specifically, regarding the Attorney's contention " With respect to Fukuda et al. reference disclosed a valve timing adjusting mechanism 84, which is entirely positioned on the lower side of a ceiling surface of the head cover 24....Fukuda et al. also disclosed an arrangement in which the valve timing mechanism is positioned within the engine body " (See Attorney's Remarks, Page 8), the Examiner disagrees. As a matter of fact, the Fukuda reference teaches the control valve unit (the valve timing controlling mechanism 84) is disposed adjacent to the head cover 24 (part of the engine body) (See Figs. 1-2, 5; Col. 10, line 60 through line 63), and is entirely positioned on the outside of the outer surface of the engine body.

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

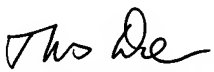
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Ching Chang


THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700